

This study shows once more: Even inpatients with acute COPD (exacerbations)

Galileo Therapy is not only safe but also increases muscle power and muscle function - even though the study used a very simple exercise: 3*2 minutes standing with knees bent slightly on the Galileo.

Especially the relevant 6 minutes walking test (simply measuring the distance covered by the patient within 6 minutes) which is relevant for every-day tasks improved by almost 60%.

Similar results where shown in other Galileo studies in COPD patients (#GRFS124, #GRFS107, #GRFS41, #GRFS32).



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Benefits of whole body vibration training in patients hospitalized for COPD exacerbations - a randomized clinical trial.

Greulich T, Nell C, Koepke J, Fechtel J, Franke M, Schmeck B, Haid D, Apelt S, Filipovic S, Kenn K, Janciauskiene S, Vogelmeier C, Koczulla AR¹.

BACKGROUND:

Patients with stable COPD show improvements in exercise capacity and muscular function after the application of whole body vibration.

We aimed to evaluate whether this modality added to conventional physiotherapy in exacerbated hospitalized COPD patients would be safe and would improve exercise capacity and quality of life.

METHODS:

49 hospitalized exacerbated COPD patients were randomized (1:1) to undergo physiotherapy alone or physiotherapy with the addition of whole body vibration.

The primary endpoint was the between-group difference of the 6-minute walking test (day of discharge - day of admission). Secondary assessments included chair rising test, quality of life, and serum marker analysis.

RESULTS:

Whole body vibration did not cause procedure-related adverse events. Compared to physiotherapy alone, it led to significantly stronger improvements in 6-minute walking test (95.55 ± 76.29 m vs. 6.13 ± 81.65 m; p = 0.007) and St. Georges Respiratory Questionnaire (-6.43 ± 14.25 vs. 5.59 ± 19.15 , p = 0.049).

Whole body vibration increased the expression of the transcription factor peroxisome proliferator receptor gamma coactivator- $1-\alpha$ and serum levels of irisin, while it decreased serum interleukin-8.

CONCLUSION:

Whole body vibration during hospitalized exacerbations did not cause procedure-related adverse events and induced clinically significant benefits regarding exercise capacity and health-related quality of life that were associated with increased serum levels of irisin, a marker of muscle activity.

TRIAL REGISTRATION:

German Clinical Trials Register DRKS00005979. Registered 17 March 2014.

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